

# PATENT ABSTRACTS OF JAPAN

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(54) METHOD OF MANUFACTURING ARC SEGMENT MAGNET, RING MAGNET,  
AND RARE EARTH SINTERED MAGNET

(57)Abstract:

**PROBLEM TO BE SOLVED:** To provide an R-T-B sintered magnet of high performance, having a thin film shape, a thin-walled shape, or radial anisotropy with an enhanced degree of orientation, in comparison with the conventional magnets.

**SOLUTION:** When the sum total of main contents of R, T, and B (R is at least one of rare earth elements including Y and T is Fe or Fe and Co) is 100% by weight %, the arc segment magnet comprises the sintered magnet, where R is 28–33%, B is 0.8–1.5%, and T is the rest, is characterized in that a quantity of oxygen contained inevitably in with respect to the total weight of the arc segment magnet is equal to or less than 0.3%, the thickness of the arc segment magnet has a thin-film shape of 1–4 mm, the density is higher than 7.56 Mg/m<sup>3</sup> (g/cm<sup>3</sup>), and at room temperature, coercive force  $iH_c$  is equal to or more than 1.1 MA/m (14 kOe) and the degree of orientation  $(Br/4\pi I_{max})$  in a given anisotropy direction is equal to or higher than 96%.

